

IN THE CLAIMS

Please cancel Claims 10, 22, 35, 48, 60, 73, 86 and 98 without prejudice. Applicants will pursue the canceled claims in a related application.

Please amend Claims 11, 23, 24, 29, 36, 37, 43, 49, 52, 61, 62, 67, 74, 75, 77, 87, 90, 99, 100 and 102 as follows:

a13 11. (amended) The method of Claim 9 wherein said second significance level is 0.06.

a14 23. (amended) The method of Claim 21 wherein said second significance level is 0.06.

24. (amended) The method of Claim 21 wherein said first significance level (α_1) is smaller than said (α_2) and said step of indicating further comprises indicating said transcript is marginally detected if $\alpha_1 \leq p < \alpha_2$.

a15 29. (amended) The method of Claim 27 wherein said threshold value is calculated using: $\tau_3 = c_3 \sqrt{\text{median}(PM_i)}$ wherein said c_3 is a constant.

a16 36. (amended) The method of Claim 34 wherein said second significance level is 0.06.

37. (amended) The method of Claim 34 wherein said first significance level (α_1) is smaller than said (α_2) and said step of indicating further comprises indicating said transcript is marginally detected if $\alpha_1 \leq p < \alpha_2$.

43. (amended) The computer software product of Claim 40 wherein threshold value is calculated using: $\tau_1 = c_1 \sqrt{\text{mean}(PM_i)}$ wherein said c_1 is a constant.

49. (amended) The computer software product of Claim 47 wherein said second significance level is 0.06.

52. (amended) The computer software product of Claim 40 wherein said testing statistic is $\text{median}((PM_i - MM_i)/(PM_i + MM_i))$.

61. (amended) The computer software product of Claim 59 wherein said second significance level is 0.06.

62. (amended) The computer software product of Claim 59 wherein said first significance level (α_1) is smaller than said (α_2) and said computer program code for indicating further comprises computer code for indicating that said transcript is marginally detected if $\alpha_1 \leq p < \alpha_2$.

67. (amended) The computer software product of Claim 66 wherein said threshold value is calculated using: $\tau_3 = c_3 \sqrt{\text{median}(PM_i)}$ wherein said c_3 is a constant.

74. (amended) The computer software product of Claim 72 wherein said second significance level is 0.06.

75. (amended) The computer software product of Claim 72 wherein said first significance level (α_1) is smaller than said (α_2) and said code for indicating further comprises code for indicating that said transcript is marginally detected if $\alpha_1 \leq p < \alpha_2$.

77. (amended) A system for determining whether a transcript is present in a biological sample comprising:

a processor; and

a memory being coupled to the processor, the memory storing a plurality of machine instructions that cause the processor to perform a plurality of logical steps when implemented by the processor, said logical steps comprising:

providing a plurality of perfect match intensity values (PM_i) and mismatch intensity values (MM_i) for the transcript, wherein each of the PM_i is paired with one of the MM_i ;

calculating a p -value using one-sided Wilcoxon's signed rank test,

wherein the p -value is for a null hypothesis that θ =a threshold value and an

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alternative hypothesis that said $\theta >$ said threshold value, wherein said θ is a test statistic for intensity difference between said perfect match intensity values and mismatch intensity values; and
indicating whether said transcript is present based upon said p -value.

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87. (amended) The system of Claim 85 wherein said second significance level is 0.06.

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90. (amended) The computer software product of Claim 76 wherein said testing statistic is $\text{median}((PM_i - MM_i)/(PM_i + MM_i))$.

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99. (amended) The system of Claim 97 wherein said second significance level is 0.06.

100. (amended) The system of Claim 97 wherein said first significance level (α_1) is smaller than said (α_2) and said step of indicating further comprises indicating said transcript is marginally detected if $\alpha_1 \leq p < \alpha_2$.

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102. (amended) A system for determining whether a transcript is present in a biological sample comprising:

a processor; and

a memory being coupled to the processor, the memory storing a plurality of machine instructions that cause the processor to perform a plurality of logical steps when implemented by the processor; said logical steps comprising:

providing a plurality of perfect match intensity values (PM_i) and background intensity values (B_i) for said transcript, wherein each of said PM_i is paired with one of said B_i ;

calculating a p value using one sided Wilcoxon's signed rank test, wherein said p value is for a null hypothesis that θ =a threshold value and an alternative hypothesis that said $\theta >$ said threshold value, wherein said θ is a test statistic for intensity difference between said perfect match intensity values and background intensity values; and

indicating whether said transcript is present based upon said p value.

Please insert new Claim 103 as follows:

103. A method for determining whether a transcript is present in a biological sample comprising:

providing a plurality of perfect match intensity values (PM_i) and mismatch intensity values (MM_i) for at least 5000 transcripts, wherein the PM_i for each of said 5000 transcripts is paired with one of the MM_i ;

calculating a p -value using one-sided Wilcoxon's signed rank test, wherein the p -value is for a null hypothesis that θ =a threshold value and an alternative hypothesis that said $\theta >$ said threshold value, wherein said θ is a test statistic for intensity difference between said perfect match intensity values and mismatch intensity values; and

indicating whether said transcript is present based upon said p -value.
